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Tourand

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[54] **LIQUID-PROPELLED SCORING GAME**

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[52] **U.S. Cl.** ..... **273/1 L;** 273/85 H

[58] **Field of Search** ..... 273/1 L, 85 H, 119 B, 273/349, 350, DIG. 26, 126 A; 272/1 B

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,869,874	1/1959	Berdner	273/119 B
3,362,713	1/1968	Miller	273/119 B X
3,773,325	11/1973	Crossman et al.	273/126 A
4,136,872	1/1979	Matsumoto	273/85 H
4,173,338	11/1979	Barnett	273/DIG. 26 X

FOREIGN PATENT DOCUMENTS

548979	10/1956	Italy	273/85 H

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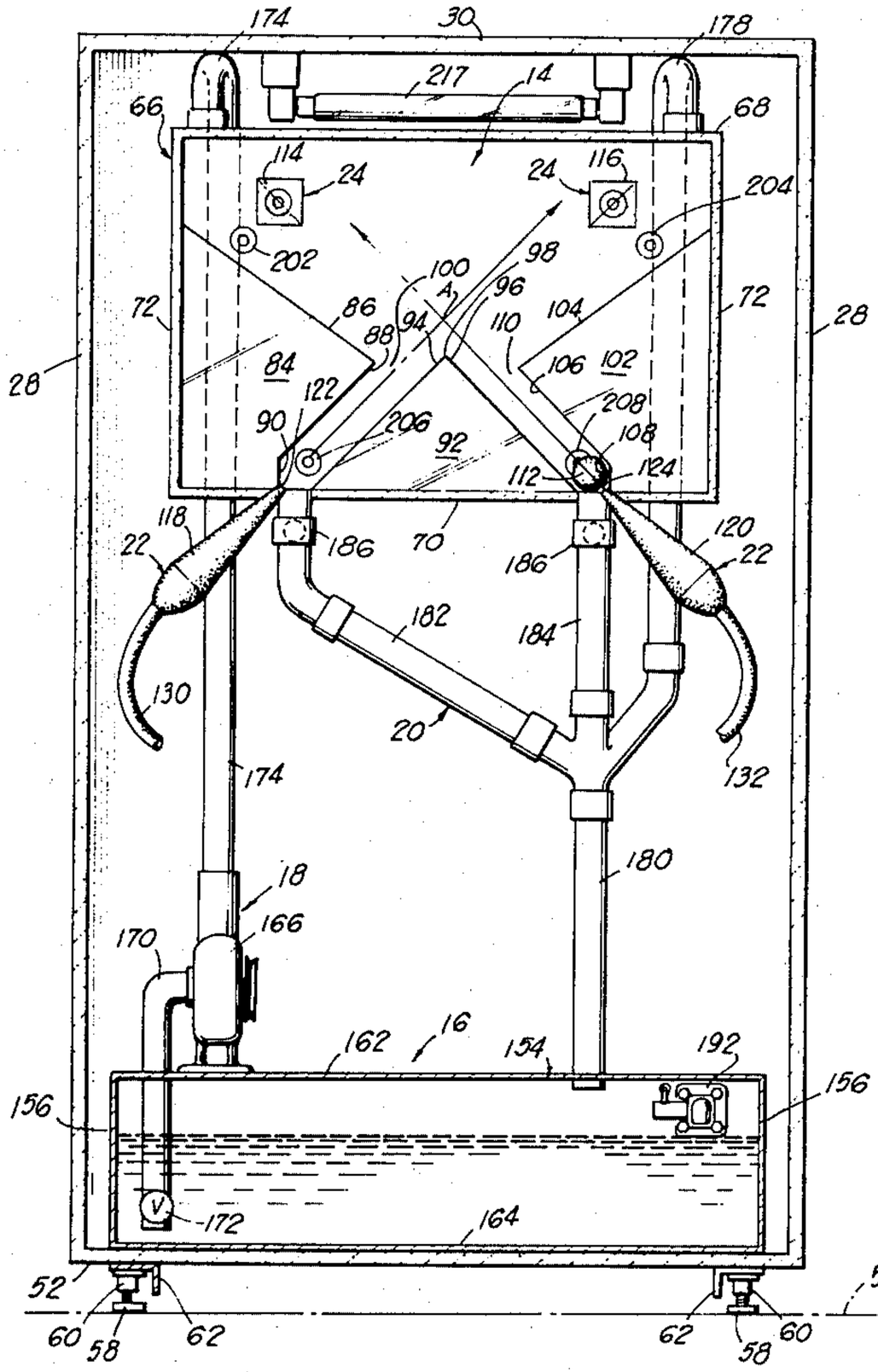
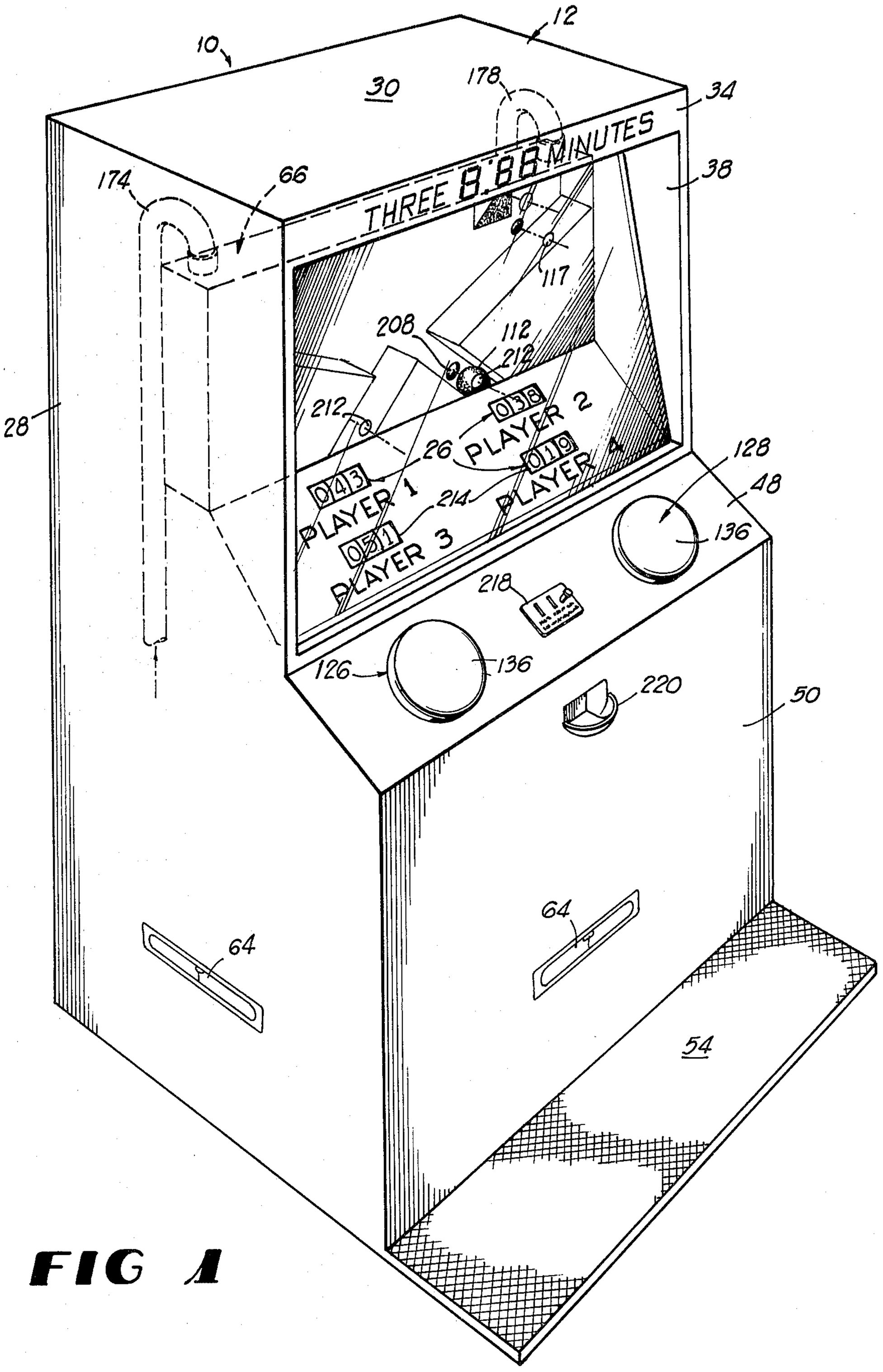
Attorney, Agent, or Firm—Newton, Hopkins & Ormsby

[57] **ABSTRACT**

A game comprising a housing with a liquid-filled playing area therein having defined passageways which are dimensioned to receive a projectile. A first player operates a first liquid directing plunger which creates currents within the liquid-filled playing area that propel the projectile toward a first target while a second player simultaneously manipulates a second liquid directing plunger in an attempt to cause the projectile to deviate away from the path of travel through the liquid toward the first target and towards a second target associated with the second player. A liquid reservoir, pump and conduits are provided for filling the playing area with liquid before the start of play and for evacuating the liquid from the playing area after a predetermined amount of playing time has elapsed. A coin controlled timer controls operation of the pump and plungers to limit the periods of play.

17 Claims, 3 Drawing Figures




10
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34
THREE 8.88 MINUTES
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PLAYER 2
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PLAYER 1
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FIG 1

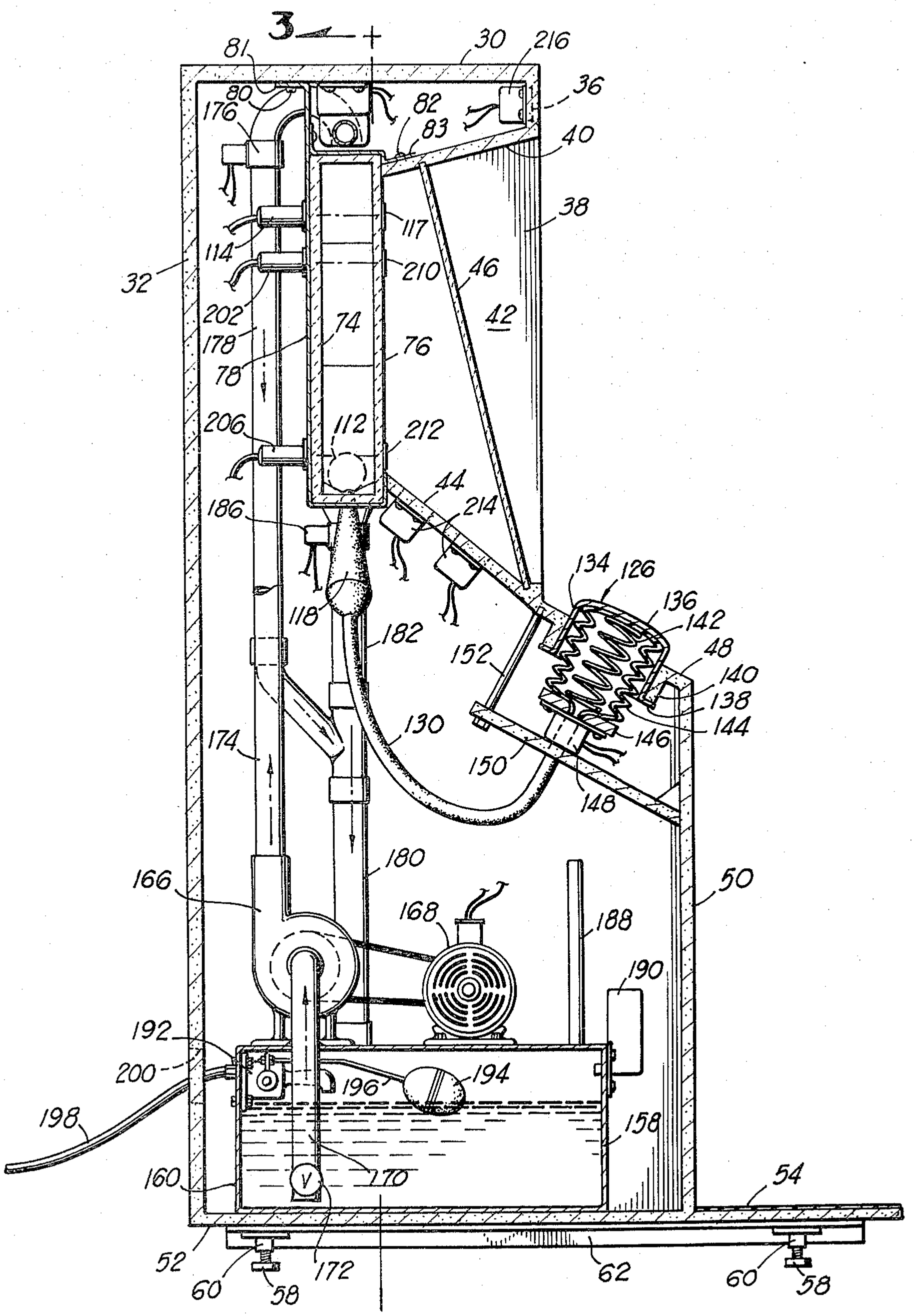
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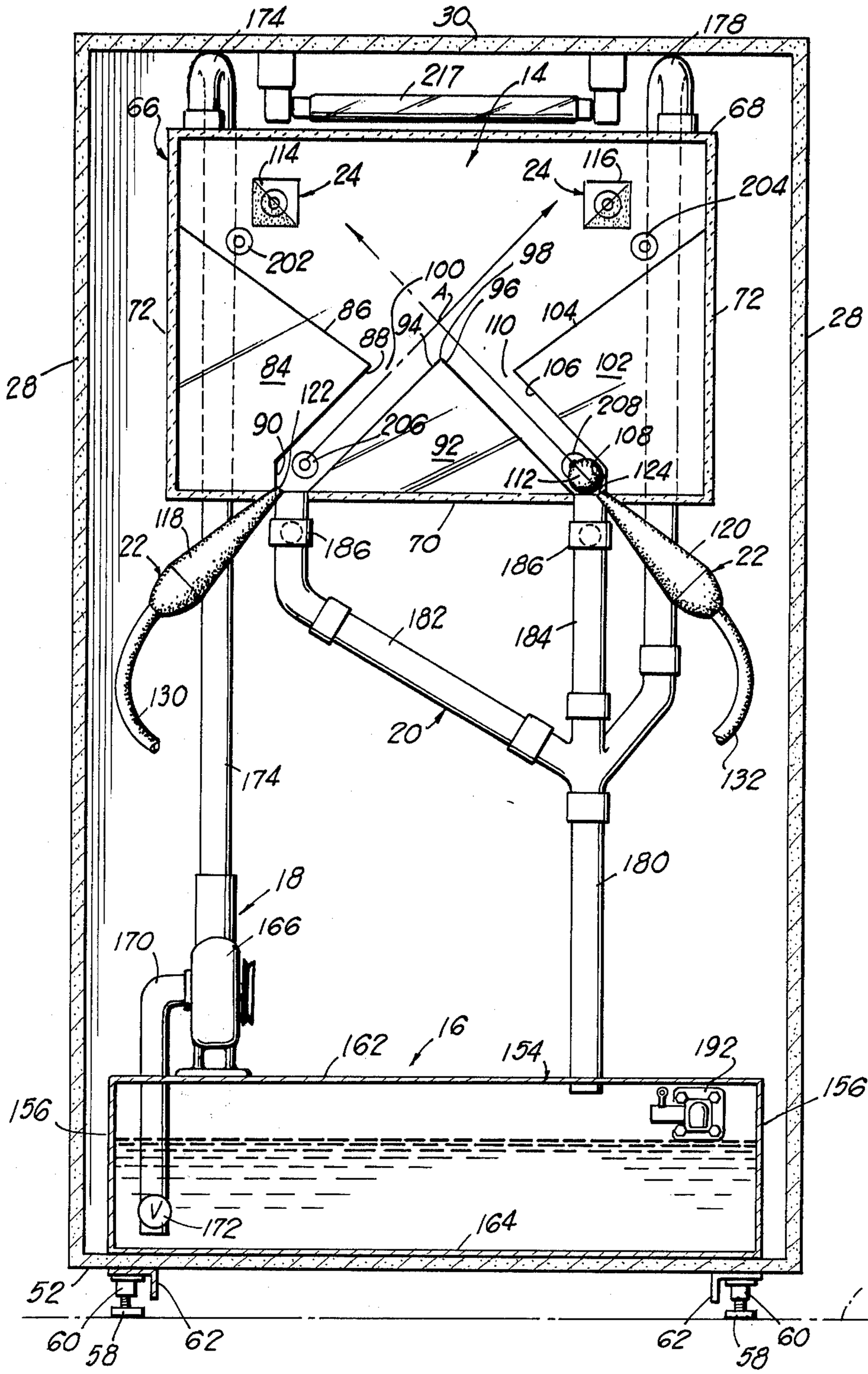
FIG 2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132
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162
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62
58
60

FIG 3

LIQUID-PROPELLED SCORING GAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to an amusement device and, more particularly, to a water-propelled scoring game.

2. Description of the Prior Art

Several devices have been proposed wherein a player manipulates a projectile by means of air pressure towards a target area while his opponent attempts by means of his supply of pressurized air to deflect the projectile away from that target area and towards his own target or goal. In those games, the players may propel a number of projectiles towards different goals. None of the prior art games provides a satisfactory amusement device wherein the players manipulate a projectile within a playing area that is full of water.

SUMMARY OF THE INVENTION

The above disadvantage is overcome by the present invention which includes a water-propelled scoring game that may be played by two or more opponents. The game is coin-actuated with a predetermined amount of playing time made available and includes a housing wherein a water-tight playing area is defined, the interior of which being visible to the players. Two coplanar projectile channels are disposed within the playing area in substantially 45° opposed attitudes, the longitudinal axes of the channels intersecting at a point which is distant from the channels but which is within the playing area.

The players operate water directing means associated with each channel to propel a projectile out of a respective channel toward a target means located exteriorly of the channel but adjacent the longitudinal axis of that channel. While one player is manipulating his water directing means to send the projectile on a desired path of travel, his opponent is attempting, through the opponent's own water directing means, to deflect the projectile from that desired path of travel. Scoring means are connected to the target means to register for that player the fact that he was successful in having the projectile pass the target means.

A water storage tank is within the housing, and pump means associated therewith transmit the water into the playing area at the start of the game. Means is associated with the playing area to evacuate the water therefrom back into the storage tank at the end of the playing time. The water storage tank is also provided with automatic means to replenish the water volume therein from a remote source.

The water directing means includes a nozzle disposed within each channel and which is in fluid communication with a manually operable plunger on the exterior of the housing. Pressing downward on the plungers causes water to be discharged under pressure from the respective nozzle into the respective channel whereby currents are created within the water contained in the playing area that effect the direction of travel of the projectile.

A first means for detecting when a projectile has been deflected by an opponent away from the desired target area is electrically connected to the nozzles to prohibit further water from being expelled from the nozzles until the projectile once again is situated within a channel. When that occurs, a second detecting means in each of the channels is energized to allow play to resume. The first and second detecting means prevent the players from continuously operating their respective plungers so that unnecessary currents are not created in the water within the playing area which would severely limit the amount of play available to the players during the allotted time.

It is, therefore, the primary object of the present invention to provide a water-propelled scoring game.

Another object of the present invention is to provide a game wherein the players activate jets of water to affect the paths of travel of a projectile within a water-filled playing area.

A still further object of the present invention is to provide a game wherein players competitively manipulate a projectile within a water-filled playing area toward respective target areas.

A further object of the present invention is to provide a game which is easy to play and provide a challenge to the players.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the present invention with some elements shown in phantom lines;

FIG. **2** is a cross-sectional, side elevational view of the present invention; and

FIG. **3** is a view taken along lines **3—3** in FIG. **2**.

DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENT

Referring to FIGS. **1** and **3** of the drawings, the numeral **10** denotes generally the present invention which includes a housing **12**, a playing area **14**, a water supply **16**, a water pumping means **18**, a water evacuating means **20**, water directing means **22**, target means **24** and score displaying area **26**.

The housing **12** is constructed of suitable material, preferably metal, and includes parallel, upstanding side walls **28** joined at their upper ends by horizontal top **30** and along their rear ends by rear wall **32**. The front of housing **12** includes a rectangular shaped, vertical upper panel **34** in which is disposed a small rectangular-shaped opening **36** adjacent the horizontal top **30**.

A large, rectangular opening **38** is formed within the upper panel **34** below opening **36**. A downwardly slanted overhang portion **40** extends from the top of opening **38** into the interior of the housing **12** and vertical sides **42** extend inwardly from the side edges of opening **38**. Bottom element **44** extends upwardly from the bottom edge of opening **38** into the interior of housing **12**. The rear edges of overhang portion **40**, sides **42** and element **44** terminate in a common vertical plane. Sloping downwardly from overhang portion **40** to bottom element **44** is a clear pane **46** of glass or plastic.

A middle panel **48** is inclined downwardly and outwardly from the bottom edge of upper panel **34** and terminates in vertical bottom panel **50**. The housing **12** further includes a horizontal bottom **52** which extends beyond the lower edge of bottom panel **50** to form a platform upon which is secured a rubber mat **54**.

As seen in FIGS. **2** and **3**, the housing **12** is supported above the floor **56** by means of two pairs of spaced, height-adjustable elements formed of threaded screws **58** which are received within complimentarily-threaded housings **60**. The housings **60** are secured to the underside of L-shaped channel members **62** which longitudinally extend along bottom **52**. Independent adjustment of the screws **58** will affect the horizontal level of the

housing **12** as measured by the leveling bubble indicators **64** which are incorporated in side walls **28** and bottom panel **50**, as shown in FIG. **1**.

Referring to FIG. **3**, the playing area **14** is defined by a water-tight rectangular vessel **66** formed from top **68**, bottom **70**, side walls **72** and rear wall **74**. The front wall **76** of the vessel **66** is of clear glass or plastic and is in abutting engagement with the rear edges of overhang portion **40**, sides **42** and bottom element **44**. The vessel **66** is maintained in its proper orientation within housing **12** by means of a metal frame **78** which extends about the exterior of vessel **66** and which is attached to the underside of top **30** by bolt **80** through flange **81** and to the top of overhang portion **40** by bolt **82** through flange **83**. The length and width of front wall **76** is substantially equal to the opening formed by the rear edges of overhang portion **40**, sides **42** and element **44**.

As seen more clearly in FIG. **3**, the interior of vessel **66** includes a solid, transversely extending articulated bottom portion formed of three sections. The first section **84** has a downwardly sloping top surface **86** which starts approximately two-thirds up along side **72** and sharply terminates with an inwardly and downwardly directed surface **88** which ends in a vertical surface **90**.

The middle section **92** is substantially in the shape of an isosceles triangle, having equal sides **94**, **96** which meet at point **98**. Side **94** is parallel to surface **88**. Side **94**, and surfaces **88**, **90** and **94** define a channel **100**.

The third section **102** is essentially the mirror image of the first section **84** and includes like surfaces **104**, **106** and **108**, with side **96** surfaces **106**, **108** defining a channel **110**. The longitudinal axes of channels **100**, **110** intersect at essentially 90° angles above point **98** at position A within the interior of vessel **66**. Channels **100**, **110** are dimensioned so as to freely receive therein a round projectile **112** having a solid exterior surface.

As seen in FIGS. **2** and **3**, the target means **24** includes two photoelectric cells **114**, **116** which extend through the rear wall **74** and are positioned above the first and second sections **84**, **102**, adjacent the longitudinal axes of channels **110**, **100**, respectively. A pair of beam reflectors **117**, shown in FIG. **2**, are disposed on front wall **76** in opposed relationship to a respective target cells **114**, **116**.

The water directing means **22** include nozzles **118**, **120** which have venturi exhaust openings **122**, **124** which project through bottom wall **70** into channels **100**, **110**, respectively. As shown in FIG. **2**, the nozzles **118**, **120** are connected to plungers **126**, **128** through water tubes **130**, **132** respectively. The plungers **126**, **128** include an annular metal cover formed of a cylindrical side wall **134** with integral top **136** and lower flange **138**. The plungers **126**, **128** extend through spaced openings in middle panel **48** which are defined by annular shells **140**, the upper surface of the flanges **138** normally biased against the lower surface of shells **140** by means of coiled springs **142** which are contained within water-sealed rubber bellows **144**. The bottom of each bellows **144** is attached to bearing plate **146** which is secured to plunger solenoid valve **148** that rests on shelf **150**. The shelf **150** juts into the interior of housing **12** from the surface of lower panel **50** substantially parallel to middle panel **48**, as seen in FIG. **2**, and is secured to the underside of bottom element **44** by a plurality of spaced, elongated bolts **152**. The interior of each bellows **144** is in fluid communication with a respective one of the nozzles **118** or **120** by means of water tubes **130**, **132** which have one of their ends pass through shelf **150**.

Referring to FIGS. **2** and **3**, the water supply **16** includes a rectangularly shaped, sealed reservoir **154** having sides **156**, front and back walls **158**, **160**, top **162** and bottom **164** which rests on the bottom **52** of housing **12**. Water pumping means **18** includes a centrifugal water pump **166** which is powered by an electric motor **168**, both of which are secured on top **162**. A pick-up conduit **170**, having a check-valve **172** therein adjacent its bottom end, extends from pump **166** into the interior of the reservoir **154** through top **162**.

An elongated fill tube **174** is in communication by one of its ends with the exhaust opening of pump **166** and with the interior of vessel **66** at its other end, through top **68**, as shown more clearly in FIG. **3**. A diaphragm sensor **176** is disposed within fill tube **174** adjacent top **68**, as seen in FIG. **2**, and is electrically connected to pump **166**, as explained in detail hereinbelow.

The water evacuating means **20** includes vessel overflow conduit **178** which extends through top **68** of vessel **66** and joins, at its bottom end, with reservoir return tube **180** which is disposed through top **162** and extends into the interior reservoir **154**, as shown in FIG. **3**. The water evacuating means **30** further comprises drain conduits **182**, **184** which are in communication with the bottoms of channels **100**, **110**, respectively. The lower ends of drain conduits **182**, **184** are in communication with reservoir return tube **180**. Valves **186** are disposed within drain conduits **182**, **184** adjacent bottom **70** and are electrically connected to the timing mechanism of game **10**, as will be described hereinafter.

The reservoir **154** further includes a vent tube **188** disposed through top **162** and chemical dispenser **190** which is attached to the exterior of front wall **158** and which is in communication with the interior of reservoir **154**, as seen in FIG. **2**, in order to periodically eject purifying chemicals into the water.

Means is provided for supply of fresh water into reservoir **154** and includes float valve **192** secured to the inner surface of rear wall **160** adjacent top **162**. A float **194** is connected to valve **192** by means of arm **196**. Hose **198**, which extends through opening **200** in rear wall **32**, joins the float valve **192** with a remote source of water.

Electric eyes **202**, **204** extend into the interior of vessel **66** through rear wall **74** below cells **114**, **116** and above sloping top surfaces **86**, **104**, respectively. Another pair of photoelectric cells **206**, **208** are disposed through rear wall **74** along the longitudinal axes of channels **100**, **110**, respectively, adjacent the bottoms thereof. Reflectors **210**, **212** are positioned on the surface of front wall **76** in co-axial alignment with eyes **202**, **204** & **206**, **208**, respectively. The eyes **202**, **204** and cells **206**, **208** are electrically connected to the plunger solenoid valves **148** associated with each bellows **144**. When the projectile **112** passes between either of eyes **202**, **204** and the associated beam reflector **210**, then the plunger solenoid valves **148** are closed to prevent water from exiting nozzles **118**, **120** until the projectile **112** rests at the bottom of either channel **100** or **110**, thereby breaking the beam between either **206** or **208**, and an associated reflector **212**, respectively. Actuation of either cell **206** or **208** causes the plunger solenoid valves **148** to open, thereby allowing play to resume. The above described disruption of play to allow the projectile **112** to assume its rest position within a channel **100**, **110** is so that the players will not create such an undue amount of currents within the water by operation of their respective plungers **126**, **128** that play cannot take place.

The score displaying area **26** includes four counters **214** which are electrically connected to target cells **114**, **116** to visually indicate a score for a player who has the projectile **112** sensed by a respective target cell **114** or **116**. Disposed within opening **36** is a timing indicator **216** which visually represents the time remaining to be played in the game. An electric light **217** is disposed within the interior of housing **12** above vessel **66**.

Coin receiving slots **218** are provided in the middle of panel **48** and are electrically connected to the pump motor **168** to actuate the filling of vessel **66** upon start of the game and to actuate the opening of plunger solenoid valves **148** to allow operation of plungers **126**, **128**. A coin return **220** is disposed in panel **50** beneath the coin receiving slots **218**.

The check valve **172** substantially reduces the amount of air that will be entrained within the water directing means **22**. That is because the water is prevented from leaving the tube **170** and returning to reservoir **154** when the pump **166** stops its operation, thereby preventing bubbles of air from forming in the water.

With regard to the pump **166**, it is understood that the type of pump which was capable of being submerged within the water contained in reservoir **154** could also be used. It is further understood that all electrical connections associated with the elements comprising the present invention are sealed against water invasion. Of course, other liquids may be used in place of water, provided view of the projectile is still possible.

OPERATION

The present invention can be played with **2**, **3** or **4** players. The threaded screws **58** are adjustable so that the bubble indicators **64** indicate that the housing **12** is at the proper orientation with respect to the floor **56**, namely, that bottom **52** is parallel to floor **56**. Once the level of housing **12** is adjusted, the players may initiate play by inserting the requisite amount of coinage into slots **218**, thereby actuating pump motor **168** which drives pump **166**.

Water is removed from the interior of reservoir **154** through pick-up conduit **170**. The water continues to be pumped upward through fill tube **174** which empties into vessel **66**. Meanwhile, the nozzles **118**, **120** and water tubes **130**, **132** and the interior of bellows **144** are filled with water by pressing down on plungers **126**, **128** to purge the bellows **144** of air while vessel **66** is filling. When the level of water within vessel **66** causes the water to back-up into fill tube **174**, that condition is sensed by diaphragm sensor **176** which is actuated to turn off pump **166**, stopping the flow of water into vessel **66**. The valves **186** within drain conduits **182**, **184** are, of course, in their closed positions, preventing water from exiting the playing area **14** which is now completely submerged.

The light **217** is now on to illuminate the playing area **14**. The timing indicator **216** reflects that, for instance, three minutes of play is available to the players. The indicator **216** begins to count-down the time when the pump motor **168** is automatically shut off. The counters **214** are each at the zero mark.

The players stand upon rubber mat **54** and begin play by pressing downward upon the plunger **126** of **128** associated with the channel **100** or **110** in which projectile **112** rests. As seen in FIGS. **1** and **3**, the projectile **112** is shown in its rest position within channel **110** so that the first player presses downward on plunger **128**. Initially, it may be necessary to repeatedly manipulate the plungers **126** or **128** so as to expel any residual air trapped within water tubes **130**, **132** and nozzles **118**, **120**.

After the water directing means **22** has been sufficiently purged of air, continued downward pressing on plunger **128** expels a stream of water out of exhaust opening **124** which engages the projectile **112**, propelling it along channel **110** toward the target **114**. The opposing player, operating plunger **126**, waits until the projectile **112** nears position A within the playing area **14** so that the water expelled from his nozzle **118** will be in alignment with projectile **112**. The opposer attempts, by manipulation of his plunger **126**, to cause the projectile **112** to deviate from its path of travel toward target cell **114** and, instead, to move toward the opposer's target cell **116**. If, before the projectile **112** is able to pass in front of target cell **114** or **116**, the projectile **112** breaks the beam generated by electric eyes **202** or **204**, the solenoid valves **148** will be actuated to stop the flow of water through the water tubes **130**, **132**, even though the plunger **126**, **128** may continue to be pressed downwardly by the opposing players. Since the nozzles **118**, **120** are now unable to expel any water, the projectile will begin to float downwardly within the water until it engages and rolls down either top surface **86** or **104** and thence down either channel **100** or **110** until it again assumes its rest position. It can thus be seen that the construction of the sections **84**, **92** and **102** is such that the projectile **112** will automatically and quickly enter either channel **100** or **110** when water pressure ceases to be applied to the projectile **112**. When it reaches its rest position, the projectile will pass through the beam generated by either cell **206** or **208**, thereby actuating valves **148** to their open position, allowing play to resume. When, during continued play, the projectile **112** passes a target cell **114** or **116**, the respective beam will be broken and a score will be generated on a respective counter **214**.

During operation of the game **10**, the players will be able to view generally the currents created in the water within the playing area **14** by operation of the plungers **126**, **128** in attempting to propel the projectile **112** towards a target cell **114** or **116**. The players' ability to see the currents in the water will enable them to more accurately plan game strategy. To enhance the players' view of the currents in the water, a chemical or colored water may be injected into the water either through any point along the water directing means **22**, such as water tubes **130**, **132**, or at the base of the channels **100**, **112**.

After the pre-selected amount of playing time has expired, the valves **148** will again close and valves **186** in drain conduits **182**, **184** will open, allowing the water within vessel **66** to return, via tube **180**, into reservoir **154**. Simultaneous with the opening of valves **186**, the solenoid valves **148** will also close, thereby preventing water from exiting the nozzles **118**, **120** even though the plungers **126**, **128** are continued to be pressed downwardly.

During continued operation of the game **10**, the water level within reservoir **154** may drop due to evaporation. The float **194** will sense that loss of water and will actuate valve **192** to allow water from a remote source to enter the reservoir **154** until the float valve **194** returns to its preselected position.

What I claim is:

1. A game including a housing, a playing area defined within said housing which is capable of retaining a volume of water therein, a projectile disposed within said

playing area, a target means within said playing area, and independently operable means for directing water at said projectile so as to propel said projectile to said target means, wherein the improvement comprises:

a reservoir of water within said housing in communication with said playing area, said reservoir capable of retaining at least said volume of water,

means for transferring said volume of water from said reservoir into said playing area,

means for evacuating said volume of water from said playing area into said reservoir,

means on said housing for activation of said game,

timing means operable for a selected period of time and being electrically connected to said game activation means whereby said timing means is energized by said game activation means, said timing means then actuating said transferring means to cause said volume of water to flow into said playing area from said reservoir and be held within said playing area substantially filling said playing area and, after passage of said selected period, to cause said evacuating means to allow said water to flow out of said playing area into said reservoir, and

water directing means including a pair of nozzles having exhaust openings which are disposed within said playing area, plunger means on said housing, means for communicating the interior of said plunger means with said nozzles, whereby manipulation of said plunger means causes a stream of water under pressure to exit said exhaust openings and to propel said projectile in a desired direction within said playing area, and means for activating and deactivating said plunger means, said activating and deactivating means being actuated to activate said plunger means by said timing means after energization of said timing means, and after passage of said selected period, being deactuated by said timing means to deactivate said plunger means.

2. A game as claimed in claim **1** further including scoring means connected to said target means whereby said scoring means visually indicates when said projectile reaches said target means.

3. A game as claimed in claim **1** wherein said transferring means includes a pump in communication with said reservoir of water, a motor to drive said pump and a fluid conduit interconnecting said pump and said playing area.

4. A game as claimed in claim **3** wherein said evacuating means includes a fluid tube in flow communication with said playing area and said reservoir of water and valve means on said fluid tube which is operable between a closed position to prevent water from returning to said reservoir and an open position to allow water to flow to said reservoir.

5. A game as claimed in claim **4** wherein said game activation means includes coin receiving means on said housing, and said timing means operable for a selected period is electrically connected to said valve means whereby upon energization by said coin receiving means said timing means causes said valve to move to said closed position to allow said volume of water to be held within said playing area and actuates said motor to drive said pump to cause said volume of water to flow into said playing area and, after passage of said selected period, causes said valve to move to said open position to allow said water to flow out of said playing area through said fluid tube into said reservoir.

6. A game as claimed in claim **1** further including means associated with said playing area for detecting the position of said projectile within said playing area and for temporarily deactivating said independently operable directing means during play upon detection of said projectile.

7. A liquid-propelled scoring game, which utilizes a volume of liquid, including a housing, a playing area defined within said housing and which is capable of holding a volume of liquid therein, a pair of projectile channels within said playing area and having longitudinal axes which intersect within said playing area, a projectile dimensioned to be received within said channels and independently operable liquid directing means in communication with said channels, wherein the improvement comprises:

a first means in said playing area associated with said channels for detecting the position of said projectile remote from said channels,

scoring means electrically connected to said first detecting means so that when a volume of liquid is held within said playing area, the actuation of a selected one of said liquid directing means to propel said projectile within an associated one of said channels through said detecting means associated with said one channel will register on said scoring means,

means for activating and deactivating said directing means,

timing means operable for a selected period of time connected to said activating and deactivating means,

means on said housing for activation of said game electrically connected to said timing means, said game activation means serving to energize said timing means, said timing means after energization serving to actuate said activating and deactivating means to activate said directing means, and after passage of said selected period of time serving to deactivate said directing means by deactuating said activating and deactivating means, and

second means associated with said playing area and said projectile channels for detecting the position of said projectile within said playing area and to cause said activating and deactivating means to deactuate said directing means during play upon detection of said projectile within said playing area and to cause said activating and deactivating means to activate said directing means upon detection of said projectile within said channels.

8. A liquid-propelled scoring game as claimed in claim **7** wherein said channels are in an upright attitude and said longitudinal axes are co-planar to a vertical cross-section of said playing area.

9. A liquid-propelled scoring game as claimed in claim **7** further including a supply of liquid and a reservoir within said housing for containing said supply of liquid.

10. A liquid-propelled scoring game as claimed in claim **9** further including means for selectively transferring a volume of liquid from said reservoir to said playing area.

11. A liquid-propelled scoring game as claimed in claim **10** wherein said transferring means include a pump in fluid communication with said supply of liquid, an electric motor electrically connected to said pump, a fluid conduit interconnecting said pump and said playing area and a first valve means on said fluid conduit

which is operably connected to said electric motor and which senses that said volume of liquid is within said playing area.

12. A liquid-propelled scoring game as claimed in claim **10** further including means for selectively returning said volume of liquid from said playing area to said reservoir.

13. A liquid-propelled scoring game as claimed in claim **12** wherein said returning means includes a fluid tube in flow communication with said playing area and said reservoir and a second valve means on said fluid tube operable between a closed position to prevent said volume of liquid from flowing through said fluid tube and an open position whereby said volume of liquid is allowed to flow through said fluid tube into said reservoir.

14. A liquid propelled scoring game as claimed in claim **13** wherein said timing means operable for a selected period of time is further connected to said electric motor and said second valve means whereby when said timing means is energized, said electric motor is actuated and said second valve means is moved to said closed position and, after the passage of said period of time, said second valve means is moved to said open position.

15. A liquid-propelled scoring game as claimed in claim **14** wherein said means on said housing for activation of said game includes coinage receiving slots.

16. A liquid-propelled scoring game, comprising:

(a) a housing;

(b) a playing area defined within said housing and which is capable of holding a volume of liquid therein;

(c) a plurality of projectile channels within said playing area and having longitudinal axes which intersect within said playing area;

(d) a projectile dimensioned to be received within said channels;

(e) means in said playing area associated with each of said projectile channels for detecting the position of said projectile;

(f) scoring means electrically connected to said detecting means;

(g) a plurality of independently operable liquid directing means in communication with said channels whereby, when a volume of liquid is held within said playing area, the actuation of a selected one of said liquid directing means propels said projectile within an associated one of said channels toward said detecting means associated with said one channel in order to register on said scoring means while the other of said liquid directing means is operable to affect the direction of travel of said projectile away from said detecting means associated with said one channel;

(h) means for activating and deactivating said directing means;

(i) a reservoir of liquid within said housing in communication with said playing area, said reservoir capable of retaining at least said volume of liquid;

(j) means for transferring said volume of liquid from said reservoir into said playing area including a pump in fluid communication with said supply of liquid, an electric motor electrically connected to said pump, a fluid conduit interconnecting said pump and said playing area and a first valve means on said fluid conduit which is operably connected to said electric motor and which senses that said volume of liquid is within said playing area;

(k) means for evacuating said volume of liquid from said playing area into said reservoir including a fluid tube in flow communication with said playing area and said reservoir and a second valve means on said fluid tube operable between a closed position to prevent said volume of liquid from flowing through said fluid tube and an open position whereby said volume of liquid is allowed to flow through said fluid tube into said reservoir;

(l) coin receiving means on said housing; and

(m) a timing means operable for a selected period of time and being electrically connected to said coin receiving means and said second valve means whereby said timing means is energized by coinage being deposited into said coin receiving means so that said motor actuates said pump to cause said volume of liquid to flow into said playing area while said second valve is in said closed position and, after passage of said selected period, to cause said second valve to move to said open position to allow said liquid to flow through said fluid tube into said reservoir, said timing means after energization also serving to actuate said activating and deactivating means to activate said directing means, and after passage of said selected period of time, serving to deactivate said directing means by deactuating said activating and deactivating means.

17. A game as claimed in claim **16** further including second means associated with said playing area and said projectile channels for detecting the position of said projectile within said playing area and to cause said activating and deactivating means to deactivate said independently operable directing means during play upon detection of said projectile within said playing area and to cause said activating and deactivating means to activate said directing means upon detection of said projectile within said channels.

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